

Physics & Detector WG

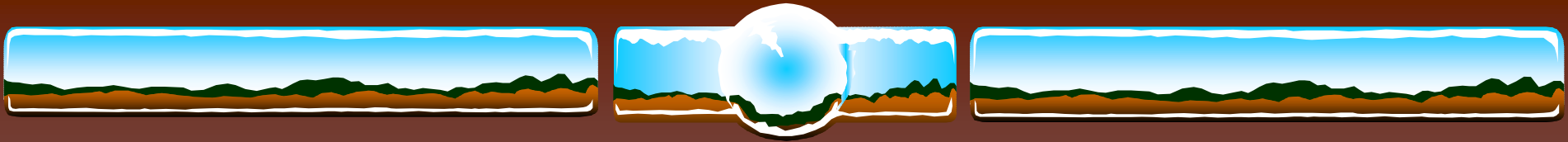
Status and Plans

Abhay Deshpande

RIKEN BNL Research Center

BNL

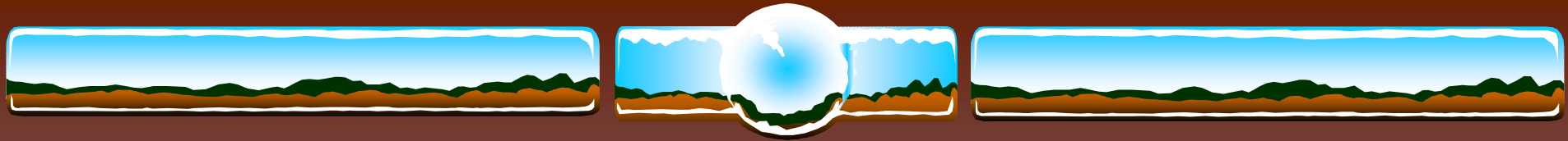
August 20th, 2003



Goal of the WG:

- ❖ Detailed study of Physics possibilities at eRHIC coupled with
 - >> accelerator, IR and detector design as they develop
- ❖ Input to IR Design and accelerator WGs on
 - >> choice of beam species & energy variability
 - >> physics acceptances of a nearly 4π detector
 - >> particular focus on forward/backward detector acceptances which were the exciting topics of unexpected physics at HERA which were left behind by the recent HERA upgrades.

Make the strongest possible case for the eRHIC at BNL....



Physics WG met twice so far:

❖ **Stony Brook in NY City, May 29th, 2003**

Rough definition of Physics topics and groups/contacts:

Summary on: www.bnl.gov/eic → eRHIC Meetings Page

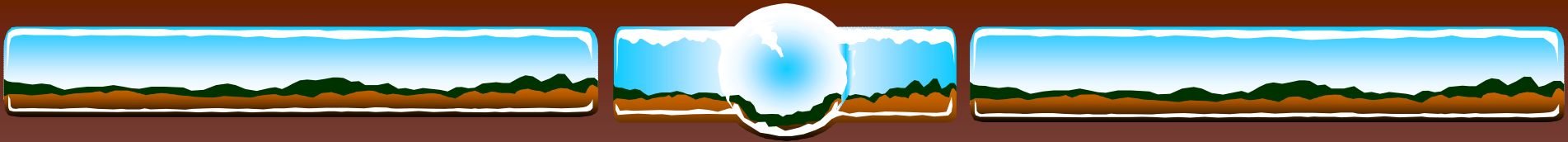
Participation by people from: BNL, MIT, Jlab, DESY, UIUC, U of Colorado and others (CERN, Saclay, ANL, Tel Aviv, U. Kracow) communicated via email prior to the meeting

❖ **Informal meeting in Boulder, CO, August 14-17**

1) Setup MC Generators for eRHIC physics studies and

2) Move towards Detector acceptance/response studies

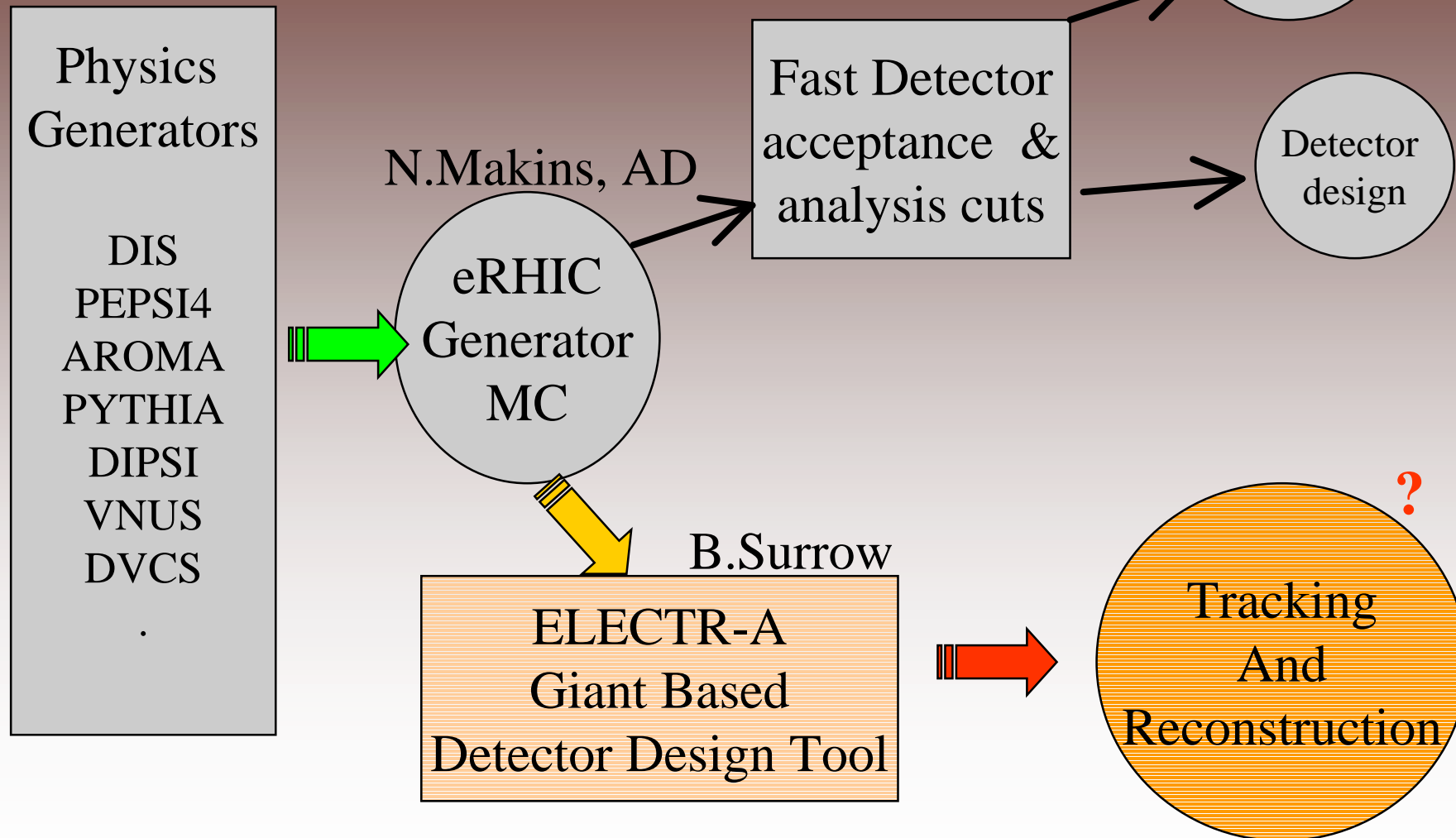
Summary and action items to appear on eRHIC Web-Pages soon.

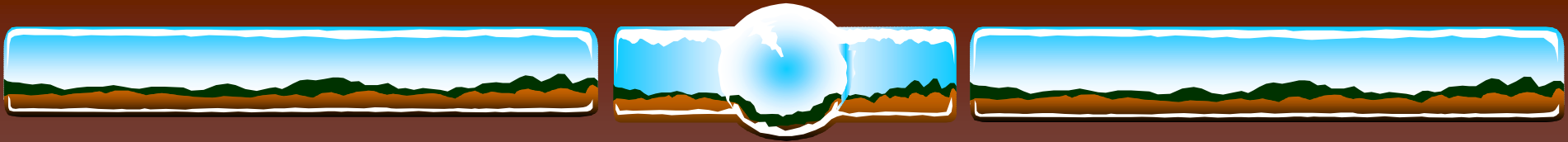


Boulder, CO, “boot-camp”

- ❖ Hosted by Prof. Edward Kinney (U. of Colorado)
- ❖ Attended by: Abhay Deshpande (RBRC/BNL), Naomi Makins(UIUC), Joseph Seele(UIUC, U. of Colorado), Rolf Ent (Jlab), Antje Bruell(MIT), Bernd Surrow(BNL, in absentia)
- ❖ Aim:
 - 1) Setup the software for MC Generator programs
 - 2) Make them bug free so that they can be run reliably at a remote place without personal intervention by “us”
 - 3) Plan links to Detector development
- ❖ Details of MC Generators and how to run them now exist at:
<http://npl.uiuc.edu/eic/bootcamp>

Work plan:





Future Plans

- ❖ Communicate over video or telephone links on a monthly basis and meet once every ~three months.
- ❖ Next meeting: early-mid October 2003
 - at BNL or JLAB
- ❖ Continue working towards CDO level of physics and detector design (post ZDR) towards early-mid 2005 with continuous input and interaction with the detector and IR working group
- ❖ **Forthcoming eRHIC related meetings:**
 - Nov./Dec.2003 → Annual eRHIC meeting (BNL)
 - January 2004, eRHIC ZDR and review (BNL)
 - Spring 2004 possible meeting at Jlab on Physics with future colliders(?)
 - Annual eRHIC meeting Fall 04(?)